

What is Claimed is:

1. A pressure-sensitive adhesive tape or sheet comprising a substrate having a pressure-sensitive adhesive layer on at least one side thereof, wherein the whole of the pressure-sensitive adhesive layer is formed of an aqueous dispersion type pressure-sensitive adhesive composition containing, as a base polymer, (A) an acrylic polymer containing a (meth)acrylic acid C<sub>4-12</sub> alkyl ester as the major monomer component; and in a surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer, (B) an anionic emulsifier containing a sulfur atom is contained in a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the surface portion of the pressure-sensitive adhesive layer, and (C) at least one hydrophilic polymer selected from polyalkylene glycols, polyvinylpyrrolidone, polyvinyl alcohol, and poly-(meth)acrylic acid is contained in a proportion of from 0.5 to 15 parts by weight based on 100 parts by weight of non-volatile matters in the aqueous dispersion type pressure-sensitive adhesive composition of the whole of the pressure-sensitive adhesive layer.

2. The pressure-sensitive adhesive tape or sheet according to claim 1, wherein the anionic emulsifier (B)

containing a sulfur atom is at least one sulfur atom-containing anionic emulsifier selected from alkyl sulfate type anionic emulsifiers, polyoxyethylene alkyl ether sulfate type anionic emulsifiers, polyoxyethylene alkylphenyl ether sulfate type anionic emulsifiers, sulfonate type anionic emulsifiers, and sulfosuccinic acid type anionic emulsifiers.

3. The pressure-sensitive adhesive tape or sheet according to claim 1, wherein the proportion of the anionic emulsifier (B) containing a sulfur atom in the whole of the pressure-sensitive adhesive layer is from 0.5 to 5 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) according to the aqueous dispersion type pressure-sensitive adhesive composition of the whole of the pressure-sensitive adhesive layer.

4. The pressure-sensitive adhesive tape or sheet according to claim 1, wherein in the surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer, a ratio of sulfur element by the ESCA measurement is less than 1 atomic %.

5. The pressure-sensitive adhesive tape or sheet according to claim 1, wherein the pressure-sensitive adhesive layer on one side of the substrate has a multilayered structure; the pressure-sensitive adhesive

layer in the outermost side has a thickness of from 1 to 5  $\mu\text{m}$  and contains the anionic emulsifier (B) containing a sulfur atom in a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the pressure-sensitive adhesive layer in the outermost side; and the pressure-sensitive adhesive layer contains the anionic emulsifier (B) containing a sulfur atom in a proportion of from 0.5 to 5 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) according to the aqueous dispersion type pressure-sensitive adhesive composition of the whole of the pressure-sensitive adhesive layer having a multilayered structure and contains the hydrophilic polymer (C) in a proportion of from 0.5 to 15 parts by weight based on 100 parts by weight of non-volatile matters in the aqueous dispersion type pressure-sensitive adhesive composition of the whole of the pressure-sensitive adhesive layer.

6. The pressure-sensitive adhesive tape or sheet according to claim 1, wherein the pressure-sensitive adhesive layer is formed of the aqueous dispersion type pressure-sensitive adhesive composition containing the anionic emulsifier (B) containing a sulfur atom in a proportion of from 3 to 5 parts by weight based on 100 parts by weight of the whole of the monomer components

constituting the acrylic polymer (A); and in the surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer, the anionic emulsifier (B) containing a sulfur atom is contained in a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the surface portion of the pressure-sensitive adhesive layer.

7. The pressure-sensitive adhesive tape or sheet according to claim 1, wherein the substrate is a porous substrate.